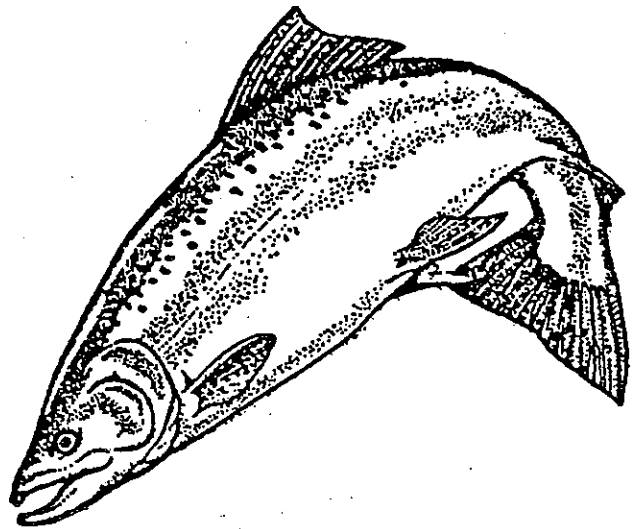
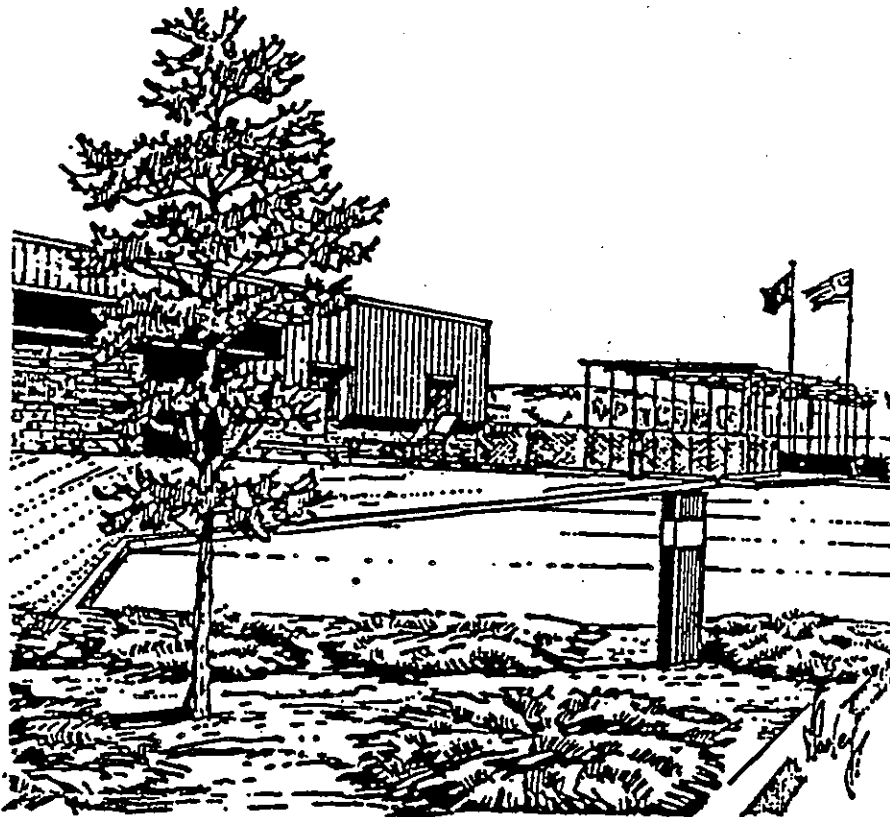


IRRIGON FISH HATCHERY



Operation and Maintenance Annual Report



October 1, 1989 to September 30, 1990
FY90

IRRIGON ACTIVITY

OCTOBER 1, 1989 - SEPTEMBER 30, 1990

INTRODUCTION NARRATIVE

OPERATIONS:

Irrigon Fish Hatchery is part of the Lower Snake River Compensation Plan (LSRCP) and was in operation from 1982 to 1984 as a pilot facility. The present facility has been in use since 1984 and was completed in 1987. The production goal for the hatchery is 1.68 million summer steelhead smolts that are reared from the eyed egg stage. These fish are released in the Grande Ronde, Wallowa and Imnaha River basins of Northeast Oregon.

Summer steelhead eggs are received from Wallowa Hatchery another LSRCP facility. The adults are trapped and spawned at the Wallowa Hatchery and two satellite facilities, Big Canyon and Little Sheep. The eggs are then incubated at Wallowa until the eyed stage when they are transferred to Irrigon. Irrigon also reared 248,000 spring chinook fingerlings and transferred them in April of 1990 to Lookingglass Hatchery.

During the summer of 1990, additional non-LSRCP fish raised were: 64,000 rainbow fingerlings and 77,000 rainbow legal for Northeast Oregon waters. The fingerling program resulted from the need to minimize the impact of the parasite causing whirling disease in rainbow reared at Wallowa Hatchery. Irrigon provided the pathogen-free well water supply needed in this case. Legal rainbows were transferred to Irrigon from distant hatcheries to provide a short-term acclimation period prior to their liberation.

During the fiscal year Irrigon reared approximately 3,200,000 fall chinook "O" age smolts and took 143,000 summer steelhead eggs for the Umatilla river. The chinook were reared in ponds made available from the initial summer steelhead releases. The Umatilla summer steelhead program calls for eyed stage eggs which are then transferred to Oak Springs Hatchery. Irrigon reared 18,000 to 154 fish/lb. from IHN positive parents.

Construction Projects:

None.

Engineering Projects:

This past fiscal year, as in many, a lack of rearing water has plagued the rearing process at Irrigon. This is due to inadequate water tables available in both of our water wells. Other problems at the wells, such as sand infiltration and blocked laterals, contribute to the overall lack of water. An additional 5,000 gpm is needed to meet the original design criteria of a well system to provide the hatchery with 25,000 gpm of water inflow. Lack of design flows can cause many problems such as low dissolved oxygen during the heaviest months of production, December through April.

The U.S. Army Corps of Engineers awarded a contract during the July to September, 1990, period to explore the feasibility of additional well sites within the area. Sufficient water was found, and quality and quantity verified.

Engineering is proceeding at this point to develop the mechanics of adding to the existing water supply system.

Personnel Changes:

We continue to be fortunate in having a Confederated Tribes of the Umatilla Indian Nation trainee at the hatchery, Jennifer Wolf. She is an asset to the program and would be a welcome addition to the staff of the new Umatilla Hatchery.

Seth Cooney was the hatchery seasonal from October 1989 through April 1990. Kurt Cummings transferred to McKenzie Hatchery and Mike Posey accepted that vacant Tech-1 position, transferring from Fall Creek Hatchery October 1990. Steve Banghart was selected for our current seasonal position.

Scott Lusted transferred here in November 1989, replacing Mike Gribble, who was promoted to Fish and Wildlife Manager-1 at Bonneville Hatchery. Scott came from McKenzie Hatchery as a Fish and Wildlife Tech-2. Scott was promoted to Fish and Wildlife Manager 2 at Lookingglass Hatchery in February 1990. Jack Hurst was selected to fill this position as a Fish and Wildlife Manager 1 and came on board in March of 1990 from Cole M. Rivers Hatchery. This Fish and Wildlife Manager 1 position will move to Umatilla Hatchery when completed and will be funded by the Bonneville Power Administration.

Bud Shannon, the Trades/Maintenance Coordinator, terminated his employment with the Agency in March 1990. This position was filled by Bob Gallup in July 1990.

STOCK FALL CHINOOK ¹ Bonneville / Priest Rapids
Lot No. 9588 / 4588

REARING

Transferred in	2,647,451	From Bonneville
2-10 to 2-20-89		2,852 lbs. @ 928/lb.
Liberated Umatilla R.		
5-15 to 5-17-89	2,393,710	35,955 lbs. @ 66.6/lb.
Transferred to Minthorn Pd.		
9-27 to 9-28-89	79,010	6,695 lbs @ 11.8/lb
No. smolts liberated	75,134	
Percent mortality at station	1.45	
Weight of smolts liberated	7,230	
Av. No. / lb. liberated	10.39	
Total pounds of food fed	50,199	
Total pounds gain for		
all fish	47,028	
Conversion rate for		
all fish	1.07	

LIBERATION

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
10/18/89	Umatilla R	75,134	7,230	10.39

Total		75,134	7,230	10.39

Total distribution trips	2
Total pounds liberated	7,230

¹ Funding for the production of these fish is from the U. S. Army Corps of Engineers and the National Marine Fisheries Service.

STOCK FALL CHINOOK ¹ Columbia River (Upriver Stock)
Lot No. 9589

REARING

Transferred in		From Bonneville
3-28 to 3-30-90	2,600,468	7,098 lbs. @ 454/lb.
Transfer in		From Bonneville
5-14-90	624,976	4,240 lbs. @ 147.4/lb.
Liberated		Umatilla R.
5-11 to 5-23-90	1,850,691	21,105 lbs. @ 87.1/lb.
Liberated		Umatilla R.
6-1-90	574,990	6,609 lbs. @ 87.5/lb.
No. smolts on hand	159,025	
Inventory adjustment	+635,900	

Percent mortality to date	0.15
Weight gain at station to date	32,857
Total pounds of food fed	35,504
Total pounds gain for all fish liberated	32,857
Conversion rate for all fish liberated	1.08

LIBERATION

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
5/11/90	Umatilla R.	265,680	3,019	88.0
5/15/90	Umatilla R.	625,931	6,867	91.2
5/21/90	Umatilla R.	565,880	7,073	80.0
5/23/90	Umatilla R.	393,200	4,139	95.0
6/01/90	Umatilla R.	574,990	6,609	87.0

Total		2,425,681	27,707	

Total distribution trips	15
Total pounds liberated	27,707

¹ Funding for the production of these fish is from the Army Corps of Engineers and the National Marine Fisheries Service.

STOCK	SPRING CHINOOK	Imnaha R. & Tribs.
Lot No.	29-89	

REARING

Eggs transferred in 10-10-89 to 10-23-89	160,000	From Lookingglass
Shock loss	10,008	At Lookingglass
Fry loss	540	At Lookingglass
Fry loss	5,325	
Total pounds of food fed	84,769	
Total pounds gain for all fish liberated	63,788	
Conversion rate for all fish liberated	1.33	
Total pounds of food fed Transferred	796	
4-16-90	154,675	To Lookingglass
Conversion rate for all fish transferred	0.81	980 lbs. @ 157/lb.

STOCK	SPRING CHINOOK	Columbia R. (upriver stocks)
	Lot No.	8589

REARING

Eggs transferred in	96,000	From Lookingglass
10-18-89		
Shock loss	8,000	At Lookingglass
Fry loss	739	
No. hatched	95,261	
Percent hatch	99.2	
Percent mortality at station	1.02	
Av. No. / lb.	106.0	
Transferred	94,095	To Lookingglass
04-05-90		
Total pounds of food fed	929	
Total pounds gain for		
all fish transferred	888	
Conversion rate for		
all fish transferred	1.05	

STOCK	SUMMER STEELHEAD	Imnaha R & Tribs.
	Lot No.	2989

REARING

Eggs transferred in	538,000	Eyed from Wallowa
5-19-89 to 6-9-89		
Shock loss	218,000	At Wallowa
Fry loss	20,000	At Irrigon
IHN Pos.	8,736	Destroyed
No. hatched	518,000	
Percent hatch	96.3	
No. smolts liberated	134,074	
No. fry liberated	18,893	
No. smolts transferred	250,010	Little Sheep Acc. Pond
		43,810 lbs @ 5.1/lb
Percent mortality at hatchery	19.4	
Weight shipped out	63,788	
Av. No. / lb.	6.0	
Conversion	1.33	

LIBERATION

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
11/14/89	Snake R-1	18,893	282	67.0
4/23/90	Catherine Cr	27,200	4,000	6.8
4/23/90	Wallowa R	21,760	3,200	6.8
4/25/90	Imnaha R	33,500	5,000	6.7
4/26/90	Grande Ronde R-1	3,212	479	6.7
4/26/90	Imnaha R.	48,402	7,299	6.6
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Total		152,967	20,260	

Total distribution trips 7

STOCK	SUMMER STEELHEAD	Imnaha R. & Tribs.
	Lot No.	2990

REARING

Eggs transferred in	536,000	Eyed from Wallowa
5-7-90 to 5-23-90		
Shock loss	290,000	At Wallowa
Egg loss	11,000	At Irrigon
Fry loss	23,000	At Wallowa
Fry loss	101,000	At Irrigon
(includes 87,000 destroyed)		
No. hatched	424,000	
Percent hatch	79.1	
No. fingerling on hand	415,241	
Percent mortality to date	2.1	
Total pounds of food fed	6,888	
Total pounds gain for		
all fish on hand	6,160	
Conversion rate for		
all fish on hand	1.12	

STOCK	SUMMER STEELHEAD	Wallowa R.
	Lot No.	5689

REARING

Eggs transferred in	1,528,000	From Wallowa
5-27-89 to 5-31-89		
Shock loss	699,000	At Wallowa
Fry loss	26,000	
No. eyed eggs	1,528,000	
No. hatched	1,502,000	
Percent hatch	98.3	
No. smolts liberated	502,767	
No. smolts transferred	601,494	
	41,710	Wallowa Acc. Pd.
		118,024 lbs. @ 5.1/lb.
		Big Canyon Acc. Pd.
		7,975 lbs. @ 5.2/lb.

	129,831	Big Canyon Acc. Pd. 25,010 lbs @ 5.19/lb
Percent mortality at hatchery	4.9	
Weight shipped out	95,956	
Av. No. / lb.	5.24	
Conversion	1.16	
Total pounds of food fed	286,838	
Total pounds gain for all fish liberated	246,575	
Conversion rate for all fish liberated	1.16	

LIBERATION

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
11/14/89	Snake R.	9,025	125	72.2
4/12/90	Grande Ronde R-2	16,826	3,580	4.7
4/13/90	Grande Ronde R-2	47,856	9,948	4.8
4/16/90	Grande Ronde R-2	55,568	11,114	4.9
4/17/90	Grande Ronde R-2	78,763	15,753	5.0
4/18/90	Catherine Cr.	26,515	5,199	5.1
4/18/90	Wallowa R.	12,000	2,400	5.0
4/19/90	Spring Cr.	53,747	10,450	5.1
4/19/90	Wallowa R.	12,240	2,400	5.1
4/20/90	Catherine Cr.	58,697	10,929	5.4
4/20/90	Wallowa R.	13,920	2,400	5.8
4/24/90	Grande Ronde R-1	57,126	10,670	5.4
4/25/90	Grande Ronde R-1	32,196	5,750	5.6
4/26/90	Grande Ronde R-1	5,071	939	5.4
4/27/90	Wallowa R.	23,217	4,299	5.4

Total	502,767	95,956
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Total distribution trips	26
Total pounds liberated	95,956

STOCK	SUMMER STEELHEAD	Wallowa R.
Lot No.	5690	

REARING

Eggs transferred in 5-14-90 to 5-25-90	1,730,000	From Wallowa
Shock loss	15,000	At Wallowa
Fry loss	290,000	
No. eyed eggs	1,730,000	
No. hatched	1,688,000	
Percent hatch	97.6	
No. fingerling on hand	1,580,876	
No. fingerling destroyed	57,788	IHN Study
Percent mortality to date	2.9	
Av. No. / lb.	56.6	
Conversion	0.93	

STOCK	SUMMER STEELHEAD	Umatilla R.	Three Mile Trap	CTUIR
		Lot No.	9190	

ADULT RETURNS

Date of first return	11/22/89	
Date of last return	5/17/90	
No. of females returning	52	
No. of males returning	49	
No. of jacks returning	0	
Date of peak returns	1/17/90	
No. of males, females, jacks released to spawn naturally	0	
No. of males, females, jacks transported out	52-49-0	(To Minthorn Pond)
Mortality of all adult returns	36	

SPAWNING RECORD

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>	<u>Males</u>
3/26/90	18,000	3	3
4/02/90	26,000	5	5
4/09/90	43,000	7	7
4/17/90	21,000	4	4
4/23/90	13,000	2	2
4/30/90	17,000	3	3
5/17/90	5,000	1	1

TOTALS	143,000	25	25

REARING

Eggs transferred in 3-26-90 to 5-17-90	143,000	From Minthorn Pond
Shock loss	40,000	
Fry loss	1,000	
Transferred	83,000	To Oak Springs
No. hatched	102,000	
Percent hatch	71.3	
No. fingerling ponded	19,000	
No. fingerling transferred	18,018	To Oak Springs
		154 lbs. @ 177/lb.
Total pounds of food fed	27,847	
Total pounds gain for all fish on hand	29,887	
Conversion rate for all fish on hand	0.93	
Percent mortality to date	5.2	
Av. No. / lb.	177	
Total pounds of food fed	131	
Total pounds gain for all fish transferred	154	
Conversion rate for all fish on hand	0.85	

LIBERATION RAINBOW TROUT

STOCK	RAINBOW TROUT ²	Oak Springs
	Lot No.	5389

	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
Total	63,650	2,920	21.8

STOCK	RAINBOW TROUT ²	Deschutes River
	Lot No.	6689

	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
Total	19,375	6,608	2.9

STOCK	RAINBOW TROUT ²	Cape Cod
	Lot No.	7288

	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
Total	57,323	20,077	2.9

Total distribution trips	45
Total pounds liberated	29,605

² Funding for the production and distribution of these fish is from the State Wildlife Fund and General Fund.

